NORTHEASTERN UNIVERSITY
Boston, Massachusetts

National Soil Project Underway at Northeastern University – Assistance Requested

Principal Research Scientist Elham Ghabbour and Chemistry Professor Geoffrey Davies are directing an undergraduate National Soil Research Project at Northeastern University Boston (NU) that aims to measure the humic acid (HA), fulvic acid (FA) and humin (HU) contents of the nation's agricultural top soils (0 – 30 cm) with newly developed, reproducible isolation methods. HA, FA and HU represent the sequestered soil carbon contents. The ultimate objective is to monitor the status of our soils over time. FAs and HAs are major microbially-resistant organic soil components that retain water, act as pH buffers, improve soil texture/permeability and regulate many other healthy soil functions. The concern is that our HAs and FAs are being depleted over time, leading to poorer and poorer soils. Soils potentially can be re-built with HAs extracted from sources such as low rank coals that are no use as fuels. Existing data do not distinguish HAs and FAs from transient soil organic matter such as leaf litter, manure and corn stover. Preliminary results on 577 samples indicate wide variation in soil HA and FA contents. The NU group has many years of experience in isolating and measuring HAs and FAs. The project needs 50 gm, air-dried soil samples to be mailed parcel post to NU from the nation's farms and counties for analysis. Parcel post will be reimbursed on request. Please submit a Sample Reply Form with each sample and provide GPS, etc on the form. Please contact g.davies@neu.edu or e.ghabbour@neu.edu and check the website www.hagroup.neu.edu. The project results will be published and shared with soil donors on request. Your participation will make this project possible and is greatly appreciated.

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THE NATIONAL SOIL PROJECT

Organic Content of the Nation's Agricultural Soils

Thank you in advance for your assistance with this research project. Soil quality is a high national priority.

We ask that you kindly send us your choice of an air-dried **50 gm sample** of a surface (0-30 cm) agricultural top soil of your County together with its geographical (GPS) location, texture and classification (if known). Please indicate on the form below if you have any historical data for this soil but do not send the data at this point. Please keep a copy of this completed form.

Please remove leaves, sticks, rocks, pebbles and obvious trash from the sample before shipping it sender-paid via USPS Parcel Post with the completed form below to the address on the form.

Undergraduate students participating in this project will determine the organic/humic and ash contents of the sample. Spectral, elemental analysis, etc. measurements may be made.

Please call with questions. Your assistance with this national project is greatly appreciated.

Geoffrey Davies Ph. D.
Elham A. Ghabbour Ph.D.
National Soil Project Directors

Soil Information Form (Please Use Capital Letters)

Your Last Name_____First Name_____Middle initial(s)____

Title (Mr., Ms.)____County_____ _____State_____

Company/Agency_____

Street Address_____City/Town_____ Zip_____

Phone: ( )_____Fax: ( )_____E-mail_____

Sample Label/Date_____ Shipping Date_____Historical data?(Y/N)_____

Texture_____ Classification _____

Other Info_____

Comments/Questions?

Please ship soil sample to:
Prof. Geoffrey Davies
Department of Chemistry & Chemical Biology
Northeastern University
Boston, MA 02115-5000
Phone: (617)-373-2834 Fax: (617)-373-8795
E-mail: g.davies@neu.edu, www.hagroup.neu.edu